

REMARKS

Applicants acknowledge the indication that claims 2-7, 13, 25, and 30 contain allowable subject matter. Claims 1-30 are pending. A new Abstract of the Disclosure has been submitted. Formal drawings have been submitted. The specification has been amended. No new matter has been added by way of this amendment. Reconsideration of the application is respectfully requested.

The language and format of the Abstract of the Disclosure has been objected to, based on its inclusion of certain "phrases which can be implied." In response to this objection, Applicants have revised the Abstract of the Disclosure to remove the inclusion of all objectionable language pointed out by the Examiner. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

The Examiner has objected to the specification based on the use of the trademark "MYLAR." According to the Examiner, "it should be capitalized wherever it appears and be accompanied by the generic terminology." In response to this objection, Applicants have revised the specification to capitalize the term "MYLAR®", and provide a generic terminology for the term. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

Claims 1-30 stand rejected under 35 U.S.C. §112, 1st ¶, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most clearly connected, to make and/or use the invention. In particular, the Examiner has stated that the diffusion barriers 102,103 shown in Fig. 4 cannot

serve to isolate the solid state nuclear track detector from *radiation* without limitation. With respect to this rejection, the following is noted.

With reference to Figs. 1 and 4 of the invention, the diffusion barriers 102,103 serve to prevent entry of thoron into chambers 12, 13. With respect to Fig. 5, there is no diffusion barrier in chamber 11, hence thoron and radon are permitted to enter it. As further described in the specification, conducting foam 142,143 prevents entry of radon and thoron decay products into the chambers (see page 8, lines 5-7 of the specification). Therefore, radon is meant to enter the chamber 12, 13, but without its decay series (thoron is completely blocked from only these chambers). On the other hand, both radon and thoron are permitted to enter chamber 11, but without their decay series since there is no diffusion barrier in this chamber. Upon entry of the gases into the chambers, they will then decay for detection by the solid state nuclear track detector. However, since there is no form of thoron in chambers 12 and 13 due to the presence of the diffusion barrier, only the radon decay series is detected in these chamber. This is consistent with the specification and what is claimed. In fact, independent claim 1 does not recite that each solid state nuclear track detector is isolated from *radiation* without limitation. Rather, claim 1 includes the limitation that each "solid state nuclear track detector...is generally isolated from radiation in the internal volume of space of the" second or third housing. Accordingly, Applicants respectfully assert that one skilled in the art to which the invention pertains would be able to make and/or use the invention as set forth and described in the specification. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1, 8-12, 14-24, and 26-29 stand rejected as being unpatentable over U.S. Patent No. 5,134,297 to *Harley* et al. in view of U.S. Patent No. 4,975,574 to *Lucas*. For the following reasons, this rejection is traversed.

The *Harley* et al. patent is directed to a device for measuring a person's actual exposure to radon gas over a period of time (see col. 3, lines 26-38).

Set forth on page 5, of the Office Action is that statement that:

“[T]he radiation monitor of *Harley* et al...comprises another solid state nuclear track detector which is generally isolated from radiation in the internal volume of the space of the housing (see col. 7, lines 51-57)...The radiation monitor of *Harley* et al. further comprises another solid state nuclear track detector which is generally isolated from radiation in the internal volume of the space of the housing (column 7, lines 51-57) but it is not in a separate chamber.

With respect to the foregoing, a concession has been made that the solid state nuclear track detector is not in a separate chamber. To cure this deficiency, a combination of the *Lucas* patent with the *Harley* patent is made based on an assertion that in col. 9, lines 22-44 *Lucas* teaches shielding a second solid state nuclear track detector in a second chamber from unintentional and stray alpha radiation. The *Lucas* patent is directed to a method and apparatus for detecting and accurately measuring the mean concentrations of radon and thoron in a gas mixture (see *Abs.*).

The claims call for a radon and thoron radiation monitor that uses alpha-track detection film in multiple, separate chambers to detect radiation. The invention further describes the use of different diffusion barriers in the chambers to allow for signal differentiation between the chambers. The signal differentiation permits differentiation between the levels of thoron and radon in the atmosphere tested. This is reflected by independent claim 1 that recites the elements of “a

first chamber...and a third chamber... .” As further set forth in claim 1, “a diffusion barrier [is provided] within the second” chamber. In addition, “a diffusion barrier [is provided] within the third” chamber. This permits the radon gas to enter all three chambers, but prevents entry of the thoron gas into the second and third chambers.

The *Lucas* patent fails to disclose that the thoron and radon gases are kept separate from each other in the second and third chambers. Rather, the *Lucas* patent states that “[t]o initiate a survey to measure the presence of and mean concentrations of [radon] and [thoron], the apparatus is placed in the desired location and the gas-type alpha particle shields over openings 23a and 24b are removed...” (see col. 7, lines 15-20). Hence, this indicates that all types of gases are permitted to enter both chambers of the *Lucas* patent. Simply put, the *Lucas* patent fails to teach the prevention of one type of gas (i.e., thoron gas) from entering second and third chambers, as set forth in independent claim 1. In view of this difference, Applicants respectfully submit that the claimed structure of the invention is not taught by the combination of the *Harley et al.* and the *Lucas* patents. Accordingly independent claim 1 is patentable over the combination of these references and therefore, reconsideration and withdrawal of the rejection are respectfully requested.

In light of the patentability of independent claim, for the reasons above, all the dependent claims are also patentable over the prior art.

In light of the foregoing amendments and remarks, this application should be in condition for allowance. Early passage of this case to issue is respectfully requested. However, if there are any questions regarding this amendment, or the application in general, a telephone

